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## Background

Thyroid nodules are common. Fine-needle aspiration cytology (FNAC) has an essential role in the evaluation of thyroid nodules, but results may be non-diagnostic.

Large-scale studies showed that FNAC sensitivity for identifying thyroid malignancy is 91.8% and the specificity 75.5% .

A standardised (FNAC) reporting system for reporting thyroid cytology is widely used (BSRTC – Bethesda)

## Results

Statistical analysis was performed with SPSS v15

The overall diagnostic yield was 95/156 (60.9%):

- 62/118 (52.54%) in the traditional group
- 33/38 (86.84%) in the BSRTC group (p=0.001).

After applying the BSRTC, we reassigned: 17 (30.4%) to Thy2, one (1.8%) to Thy3 and 38 (67.8%) remained thy1 (non-diagnostic).

Use of BSRTC improved the overall diagnostic accuracy to 113/156 (72.43%), (p=0.015).

Applying BSRTC to FNAC which were previously reported according to the traditional system increased diagnostic yield to 80/118 (67%), (p= 0.008).

## Aims and Methods

The aim of this study was to assess the diagnostic accuracy of (FNAC) of thyroid nodules performed at our hospital before and after the introduction of (BSRTC)

We evaluated all FNAC performed in our hospital between 2005-2015.

The records of 156 patients were reviewed: 118 FNAC were reported traditionally and 38 by BSRTC.

We re-evaluated non-diagnostic cytology in the traditional reporting system using the BSRTC system.

Cytology reports were reassigned a Thy 1-5 group.

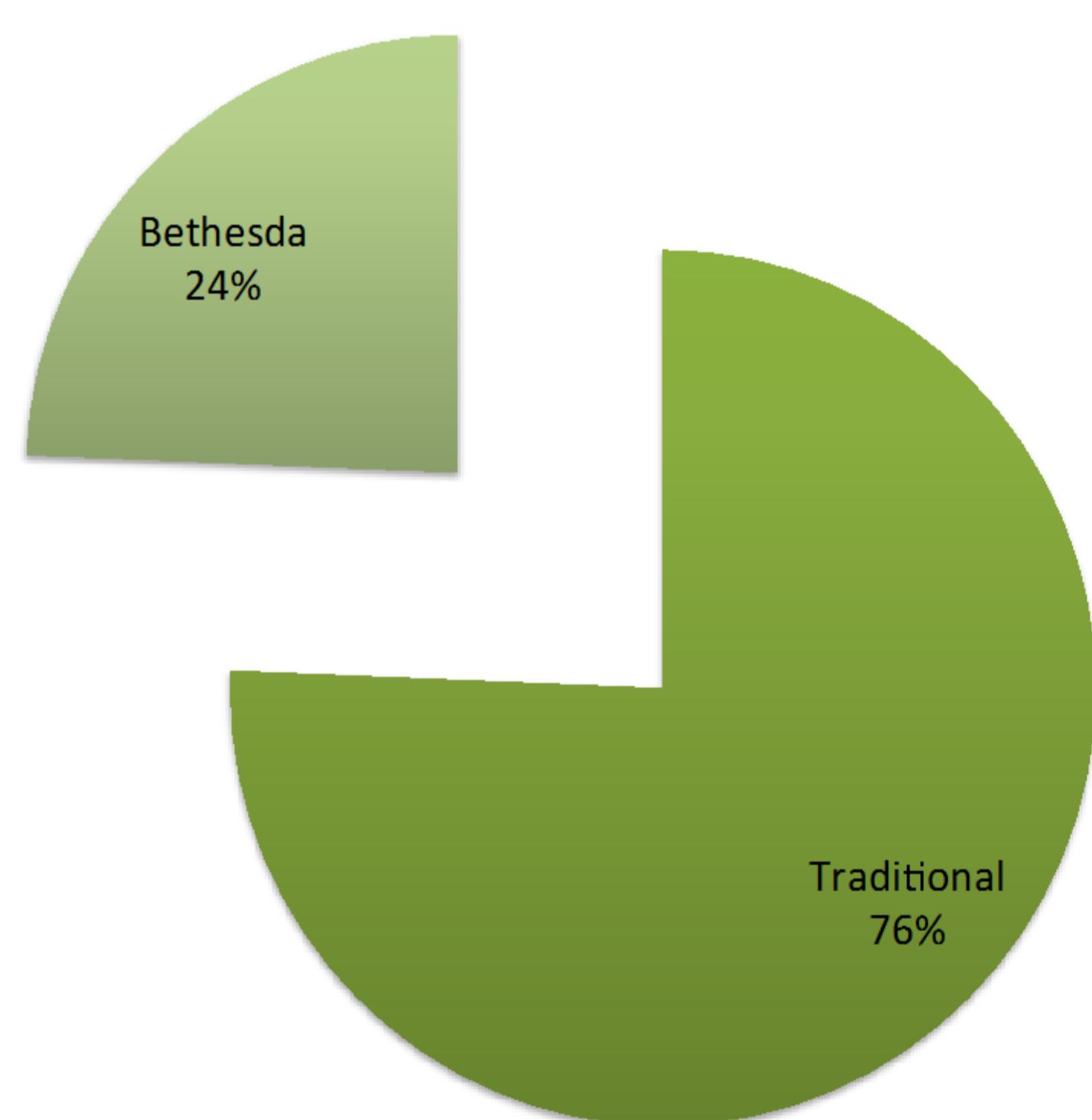
	Traditional	BSRTC
Age (years)	56.93 ± 14.87	59.39 ± 13.57
Nodule size (cm)	2.88 ± 1.11	3.32 ± 1.36

Traditional	'Thy'	Bethesda
Non-diagnostic	Thy1	I
Benign	Thy2	II
Follicular/ Atypia undetermined significance	Thy3	III
Follicular/ Atypia neoplasm		IV
Suspicious	Thy4	V
Malignant	Thy5	VI

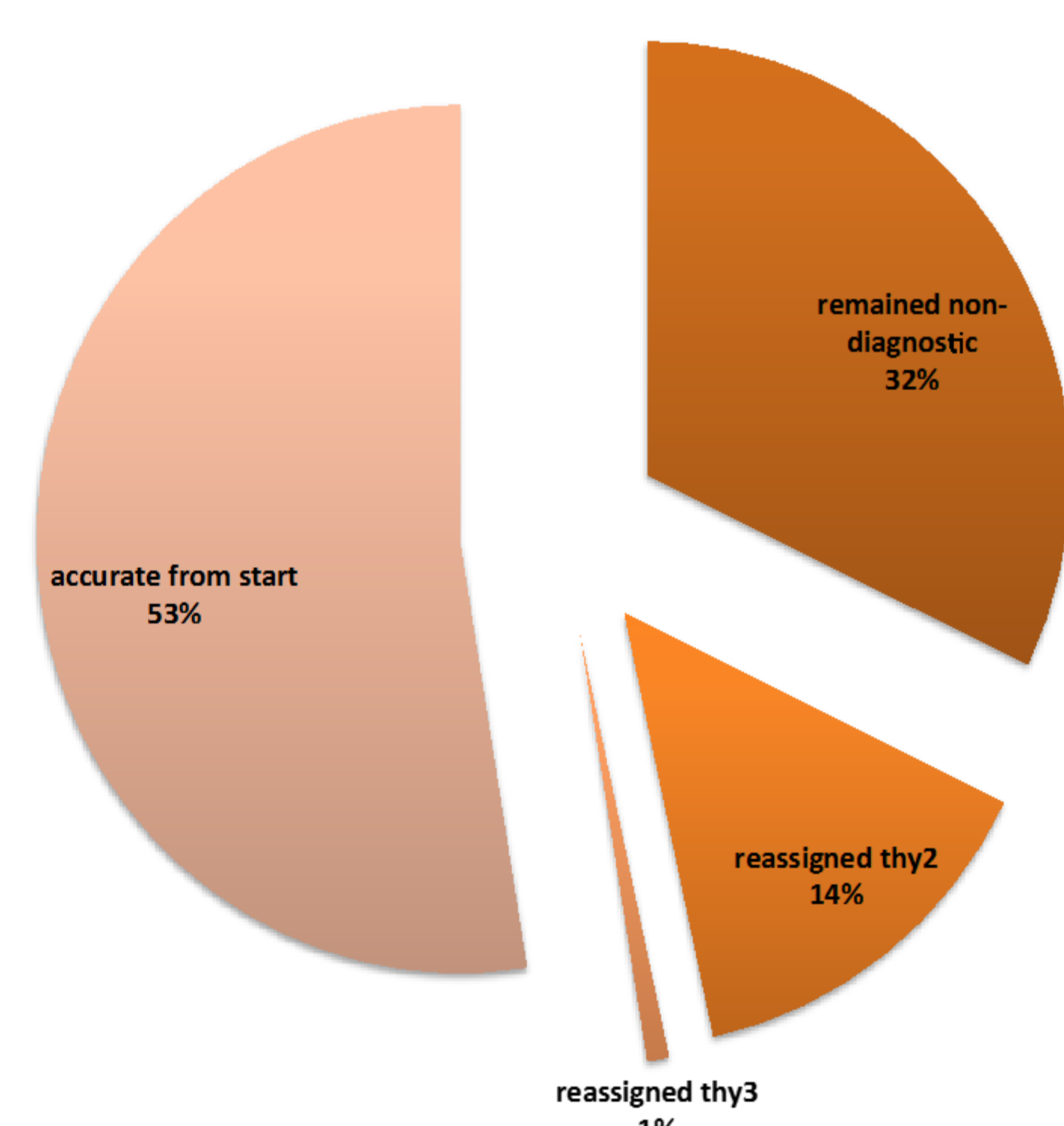
## Conclusion

The use of the BSRTC reporting system significantly improved the FNAC diagnostic yield

Fine Needle Aspirate- Traditional vs Structured



Traditional reports reassigned



## References

- Cibas ES, Ali SZ. The Bethesda System for Reporting Thyroid Cytopathology, Am J Clin Pathol 2009
- British Thyroid Association, Royal College of Pathologists. Guidelines on the reporting of thyroid cytology specimens. London. RCP 2009
- American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer, Thyroid Volume 26, Number 1, 2016

